

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1.-42. (cancelled)

43. (Currently amended) A device for minimally invasive medical treatment, comprising:
a tubular member having a proximal end and a distal end;
a cryo therapy apparatus connected to the distal end of the tubular member;
and an optical sensor near the distal end of the tubular member to monitor temperatures created by use of the cryo therapy apparatus,
wherein the cryo therapy apparatus is sized and arranged for vascular introduction.

44. (Previously Presented) The device of claim 43, further comprising a temperature quantification device in communication with the optical sensor.

45. (Cancelled)

46. (Previously Presented) The device of claim 43, wherein the optical sensor is positioned to observe ice or ice ball formation created by the cryo therapy apparatus.

47. (Previously Presented) The device of claim 43, wherein the optical sensor is coupled to a retractable member.

48. (Cancelled)

49. (Previously Presented) The device of claim 43, wherein the optical sensor is disposed at least partially within a lumen defined in the tubular member.

50. (Previously Presented) The device of claim 43, wherein the cryo therapy apparatus comprises an inner chamber and an outer chamber.

51. (Cancelled)

52. (Currently amended) A device for minimally invasive medical treatment, comprising:
a tubular member having a proximal end and a distal end;
a cryo therapy apparatus connected to the distal end of the tubular member;
and an optical imaging apparatus near the distal end of the tubular member to monitor temperatures resulting from use of the cryo therapy apparatus,
wherein the cryo therapy apparatus is sized and arranged for vascular introduction.

53. (Cancelled)

54. (Previously Presented) The device of claim 52, wherein the cryo therapy apparatus comprises an inner chamber and an outer chamber.

55. (Currently amended) A method of monitoring the temperature of an area of interest during a cryoplasty procedure, comprising:
providing a temperature monitoring device including a tubular member having a proximal end and a distal end, a cryo therapy apparatus connected to the distal end of the tubular member, and an optical sensor near the distal end of the tubular member in a vascular system;

advancing the temperature monitoring device to an area of interest;
cooling at least a portion of the area of interest with the cryo therapy apparatus; and
measuring temperature at a location within the area of interest with the temperature
monitoring device,

wherein the area of interest comprises a vascular area.

56. (Cancelled)

57. (Previously Presented) The method of claim 55, further comprising observing ice
or ice ball formation created by the cryo therapy apparatus.

58. (Previously Presented) The method of claim 55, wherein the temperature is
measured while performing cryo balloon therapy.

59. (New) The device of claim 43, wherein the optical sensor comprises an infrared
optic sensor.

60. (New) The device of claim 43, further comprising a fluorescing marker band
positioned to permit locating the device during an internal medical procedure.

61. (New) The device of claim 43, wherein the temperature sensor comprises a
detector in predetermined positional relationship to an emitter.

62. (New) The device of claim 43, wherein the cryo therapy apparatus comprises an
expandable balloon defining an interior volume in fluid communication with a coolant supply
lumen.

Applicant : Daniel M. Lafontaine
Serial No. : 10/786,322
Filed : February 25, 2004
Page : 6 of 10

Attorney's Docket No.: 10527-437002 / 00-0301-CON

63. (New) The device of claim 62, wherein the balloon is rigidly attached to the tubular member.